HESIONE

F (B)

6

JOHN READHEAD &
SONS LTD.

525-6-8-9

530, 2, 3, 6, 7, 8 & 540.

Profile & Deck

Approved plans

4

S.S. EMPIRE SQUIRE
NEWCASTLE ON TYNE.
Report No. 100132

Makedonia

SS EMPIRE
Emp FOREST
NEWCASTLE ON TYNE.
Report No. 100299

S S EMPIRE HAZLITT
NEWCASTLE ON TYNE.
Report No. 100567.

S.S. "EMPIRE RUSKIN"
NEWCASTLE ON TYNE.
Report No. 100758.

S.S. EMPIRE LAKELAND
NEWCASTLE ON TYNE.
Report No. 100924

JOHN READHEAD &
SONS LTD.,
YARD No. 536

"EMPIRE PICKWICK"
NEWCASTLE ON TYNE.
Report No. 101664

Profile & Deck plans.

M/V ANTHOS
ex
MAKEDONIA

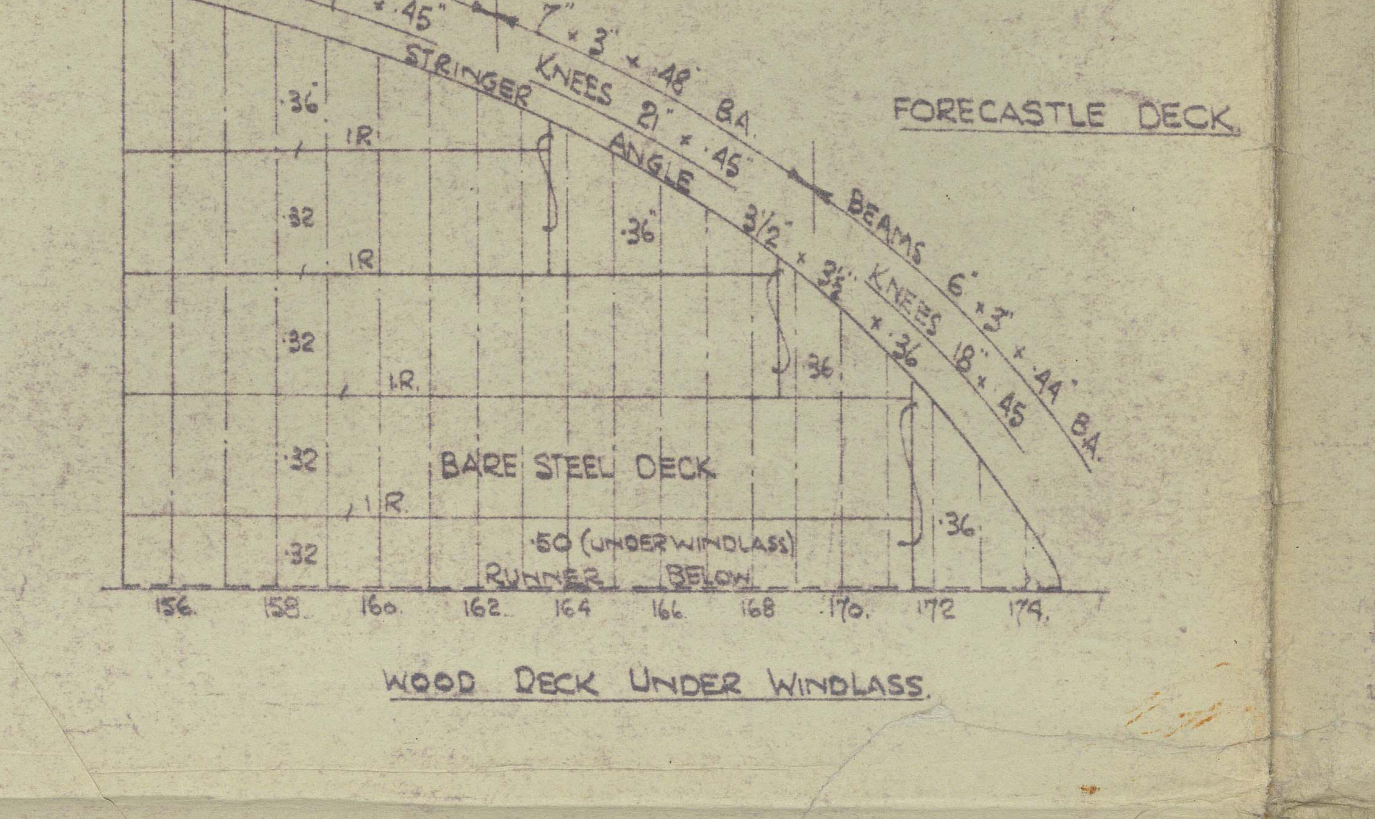
014099-014109-0193

31 JAN 1941

20141
8081

ACCOMM
ENGINE SPACE
BOILER SPACE
SHAFT
TUNNEL WELL
WATER BALLAST TANK
PEAK FLOORS 42 16 LAP ON FRAME
FLAT STEM AND FORE PEAK WILL BE SUBMITTED
PARALLEL DECK
CARGO HATCH 31'-0" x 20'-0"
ENGINE CASING
BOILER CASING
STOKE HOLD
SHIFT OF BUTTS INDICATED IS TYPICAL ONLY
SECOND DECK
PARALLEL BODY
TANK TOP
AFT PEAK BOTTOM STRINGER
FORE PEAK BOTTOM STRINGER

Stern & Stem



FORECASTLE DECK
BARE STEEL DECK
WOOD DECK UNDER WINDLASS

N/N ARDPATRICK

Also 526-8-9
580, 2, 3, 6, 4.

SHIP Nº 525 (READHEAD'S)
PROFILE & DECK PLANS.

SCALE :- 1/8" = ONE FOOT.

Endorsed for 532 - 20/3/42

Endorsed for 526 - 3/3/41

Endorsed for 528-9 - 16/10/41
Subject to minor modifications to details of fabricated parts.

Also 530 - 16/12/41.
Also 533 - 20/3/42.
" 536 - 15/9/42
" 534 - 3/11/42.

DIMENSIONS :- 425'-0" B.P. ON L.W.L. x 56'-0" MLD x 36'-9" NORMAL SHELTER / 37'-8" FLAT SHEER TO UPPER DECK

TO CLASS 100.A.1 WITH FREEBOARD AT LLOYDS SPECIAL SURVEY

SHEER FORWARD	81"
SHEER AFT	31"
ROUND OF BEAM	14"
NO TUMBLE HOME	

THE SCANTLINGS OF BULB ANGLE AND CHANNEL SECTIONS GIVEN ON THIS PLAN ARE "N.B.S."

PLANS OF CARGO HATCHES, HATCH END BEAMS, DECK GIRDERS AND CRUISER STERN, WILL BE SUBMITTED LATER.

THE SCANTLINGS ARE SUITABLE FOR LOAD DRAFT OF 26'-9" EXTREME

W.S.
31.1.41

28/525 W.R.H.
28/1/41

014099-014129-0143

ss. "EMPIRE RUSKIN"
NEWCASTLE ON TYNE.
Report No. 100458.

JOHN READHEAD &
SONS LTD.,
YARD No. 536
"EMPIRE PICKWICK"
NEWCASTLE ON TYNE.
Report No 101664

Midship Section

14

014099-014109-0142

6-5-47.

5

JOHN READHEAD &
SONS LTD.,

525-6-8-9
530, 2, 3, 6, 7, 8 + 540.

Midship Section

4

Approved plan

S.S. EMPIRE SQUIRE. ~~N.N.~~ ex MAKEDONIA
NEWCASTLE ON TYNE. n/n ANTHAS
Report No. 100132.

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ss EMPIRE FOREST
NEWCASTLE ON TYNE.
Report No. 100299

S S EMPIRE HAZLITT
NEWCASTLE ON TYNE.
Report No. 100567

Vessels not prefabricated - 525, 526, 532, 538.

Vessels, part pre-fabricated - 528, 529, 530, 533, 536, 537, 540.

S.S. EMPIRE LAKELAND
NEWCASTLE ON TYNE.
Report No. 100924

26-11-40
7037

31 JAN 1941

[illegible] 525 [illegible]

[illegible] for 526 [illegible]
[illegible] for 533-4 [illegible]
[illegible]
Also 534 [illegible]
[illegible] 535 [illegible]
536 19/9/42
537 3/11/42

THE SCANTLINGS ARE SUITABLE FOR A DRAUGHT OF 26'-3" EXTREME

SHIP No 525 (READHEADS)

MIDSHIP SECTION.

SCALE :- 1/2" = ONE FOOT.

TO CLASS 100 A.I. WITH FREEBOARD AT LLOYDS SPECIAL SURVEY.

DIMENSIONS :- 425'-0" B.P. ON L.W.L. × 56'-0" M^LD 56'-3" EXT. × ~~27'-9" NORMAL SHEER~~ 28'-8" FLAT SHEER M^LD TO 2ND D^K (~~36'-9" NORMAL SHEER~~ 37'-8" FLAT SHEER M^LD TO UPPER D^K

LLOYDS NUMERALS TO NORMAL SHEER

FIRST LONGITUDINAL NUMBER L × D = 425'-0" × 35·75	= 15193·75
SECOND LONGITUDINAL NUMBER L × (B+D) = 425'-0" × (56'-0" + 35·75)	= 38993·75
L/D TO UPPER DECK = 425'-0" ÷ 36'-75"	= 11·27
D MOULDED DEPTH = 27·75 + 8'-0"	= 35·75
d = 36·75 − (9'-0" + 3'-7¼") − CREDIT FOR DEEPER KNEES & FRAME BRACKET	= 23·3

EQUIPMENT NUMBER

SECOND LONGITUDINAL NUMBER = 425'-0" × (56'-0" + 36·75)	= 39418·75
FORECASTLE = 40'-0" × 7·5 × 3/4	= 225·00
MIDSHIP ACCOMMODATION & CASING = 72·25 × 8'-0" × 1/2	= 289·00
SALOON ACCOMMODATION = 30·0 × 8'-0" 1/2	= 120·00
EQUIPMENT NUMBER	= 40052·75

EQUIPMENT

× 2 BOWER ANCHORS 68 CWTS EACH STOCKLESS
1 STREAM ANCHOR 19 CWTS EX-STOCK.
× 225 FATHOMS 2 5/16" STUD CHAIN CABLE 600 CWTS.
90 FATHOMS 1 5/16" STREAM CHAIN OR 5" FLEXIBLE STEEL WIRE 6" × 12"
120 FATHOMS 4 3/4" SPECIAL FLEXIBLE STEEL WIRE 6" × 24",
2 HAWSERS 90 FATHOMS 8" HEMP OR 2 3/4" FLEXIBLE STEEL WIRE 6" × 12"
2 WARPS 90 FATHOMS 7" HEMP OR 2 1/2" FLEXIBLE STEEL WIRE 6" × 12"

× See letter

RIVETING NOTE.

RIVETS IN FRAMES TO FLOORS AND CROSS TIE PLATES IN AFT PEAK SPACED 5 DIAS APART CR TO CR
RIVETS IN FRAMES TO SHELL AT FLAT OF DOUBLE BOTTOM FORWD HALF LENGTH FORWD SPACED 5½ DIAS (TWO COMPLETE ROWS)
RIVETS IN FRAMES TO FLOORS AT FLAT OF DOUBLE BOTTOM FORWD HALF LENGTH FORWD SPACED 6¼ DIAS (TWO COMPLETE ROWS)
RIVETS IN SIDE FRAMES TO SHELL SPACED 6½ DIAS APART, 5½ DIAS APART IN WAY OF FORE & AFT PEAK TANKS AND DEEP FRAMING FORWD
RIVETS IN BOTTOM FRAMES TO SHELL AFT HALF LENGTH FORWD SPACED 7 DIAS APART CR TO CR
RIVETS IN 3 R. BUTTS OF OUTSIDE PLATING AND OF DECK STRINGER PLATES SPACED 3½ DIAS APART CR TO CR
RIVETS IN 4 R. BUTTS OF OUTSIDE PLATING AND OF DECK STRINGER PLATES SPACED 4 DIAS APART CR TO CR
RIVETS IN SEAMS OF SHELL PLATING, DECK PLATING AND INNER BOTTOM PLATING AS PER TABLE 40.
RIVETS IN BUTTS OF DECK PLATING, INNER BOTTOM & MARGIN PLATING SPACED 4 DIAS. APART CR TO CR
RIVETS IN SEAMS & BUTTS OF BULKHEAD AND TUNNEL PLATING, MARGIN ANGLES AND WEATHER DECK STRINGER ANGLES AND BULKHEAD FRAME TO BULKHEAD SPACED 4½ DIAS APART CR TO CR
RIVETS IN FLAT KEEL ANGLES, VERTICAL ANGLES CONNECTING FLOORS TO CENTRE GIRDER, AND SHELL FLANGE OF WATERTIGHT BULKHEAD FRAME SPACED 5 DIAS APART CR TO CR
RIVETS IN FRAMES TO FLOORS AFT HALF LENGTH FORWD REVERSE FRAMES TO FLOORS AND INNER BOTTOM PLATING VERTICAL ANGLES TO FLOORS AND SIDE GIRDERS, IN BULKHEAD STIFFENERS (EXCEPT PEAK BULKHEADS) AND IN DECK PLATING TO BEAMS ON EVERY FRAME SPACED 7 DIAS APART CR TO CR
RIVETS IN CENTRE GIRDER TOP ANGLES SPACED 7 DIAS APART CR TO CR NON WATERTIGHT.
RIVETS IN CENTRE GIRDER TOP ANGLES SPACED 5 DIAS APART CR TO CR WATERTIGHT

THE SCANTLINGS OF ANGLE AND BULB ANGLE SECTIONS GIVEN ON THIS PLAN ARE N.B.S.

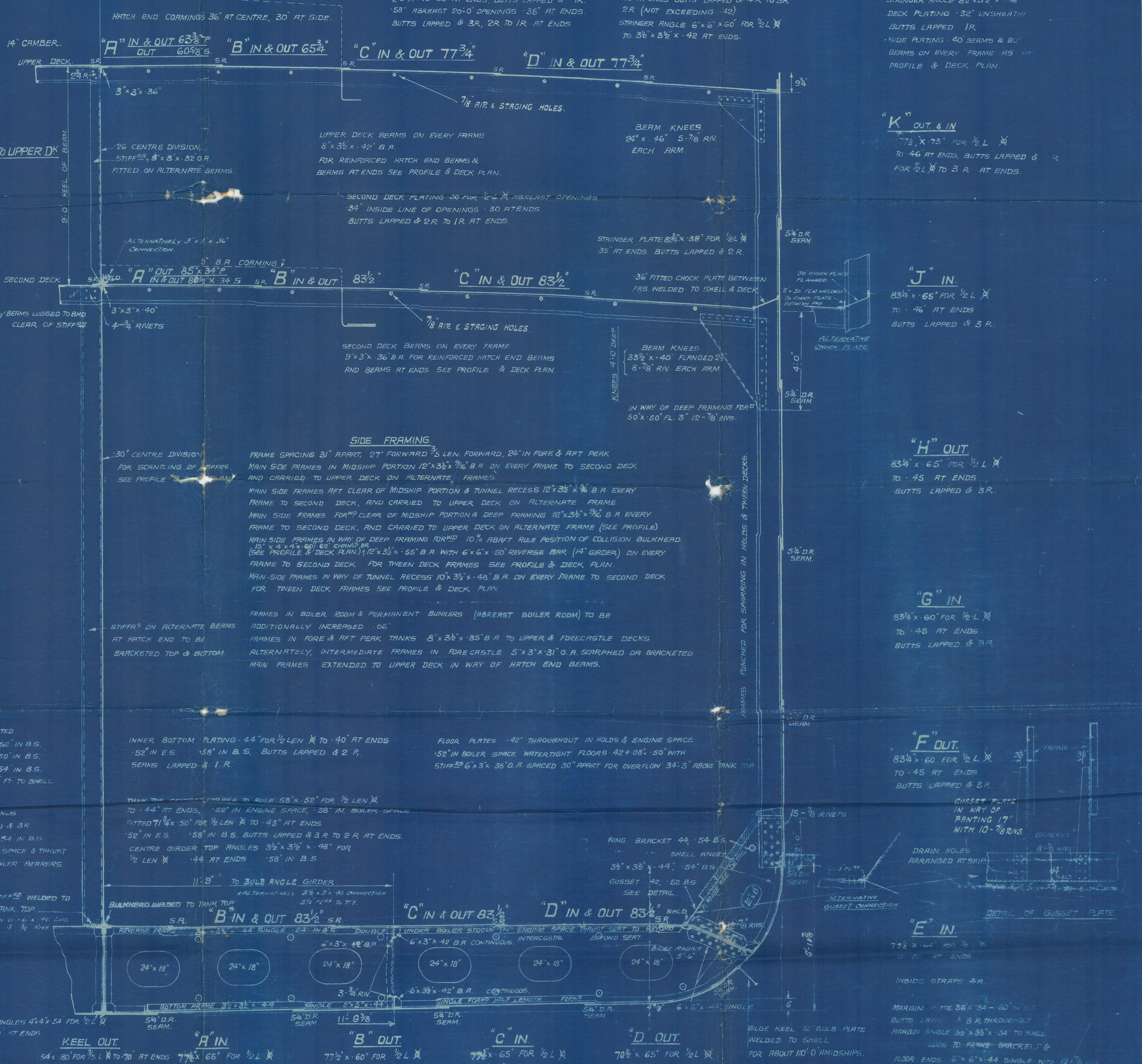
PLATE STEM, STERN POST AND RUDDER POST WILL BE SUBMITTED

LIST OF ALTERNATIVE AMERICAN SECTIONS WITH CORRESPONDING N.B.S. EQUIVALENTS

N.B.S.	ALTERNATIVE AMERICAN
12" × 3½" × 9/16" B.A.	12" × ·50" × 3½" × 32·9 LBS CHANNEL
12" × 3½" × ·62" B.A.	12" × ·60" × 3½" × 37 LBS CHANNEL
12" × 3½" × ·45 B.A.	12" × ·45" × 3½" × 30·9 LBS CHANNEL
12" × 3½" × 7/16" B.A.	12" × ·45" × 3½" × 30·9 LBS CHANNEL
8" × 3½" × ·42" B.A.	8 × 3½" × ·46" B.A.
9" × 3" × ·36" B.A.	9" × 3½" × ·38" B.A.
6 × 3½" × ·42" B.A.	6" × 3½" × ·46" B.A.
6 × 3" × ·42 B.A.	6 × 3 × ·46 B.A.
7½" × 3" × 3/8" B.A.	8 × 3 × ·34 B.A.
7½ × 3 × ·42" B.A.	8 × 3 × ·34 B.A.
8" × 3 × ½" B.A.	8 × 3 × ·52 B.A.
7 × 3" × 3/8 B.A.	7 × 3 × ·38 B.A.
7 × 3 × 3/8 B.A.	7 × 3 × ·38 B.A.
8 × 3 × ·44 B.A.	8 × 3 × ·46 B.A.
7 × 3 × ·40 B.A.	7 × 3 × ·44 B.A.

SIDE GIRDERS WHERE PLATE FITTED.
PLATE ·38" IN HOLDS, ·42" IN E.S. & ·52" IN B.S.
VERTICAL ANGLES 3" × 3" × ·40" ·50" IN B.S.
TOP ANGLES 3" × 3" × ·44" ·54" IN B.S.
BOTTOM ANGLES 3½" × 3" × ·44" 3½" FL TO SHELL.

CENTRE GIRDER.
43¼ × ·54" FOR ½ LEN ⊗ ·46 AT ENDS
62" IN BOILER SPACE, BUTTS LAPPED & 3R
VERTICAL ANGLES 3½" × 3½" × ·44 SINGLE ·54 IN B.S.
5" × 5" × ·44" SINGLE UNDER ENGINE SPACE & THRUST SEATING 5" × 5" × ·54" UNDER BOILER BEARERS.



HATCH END COAMINGS 36" AT CENTRE, 30" AT SIDE.

UPPER DECK PLATING INSIDE OPENINGS ·40" FOR ½L ⊗ TO ·36" AT ENDS. BUTTS LAPPED & 1R.
·58" ABREAST 20'-0" OPENINGS ·36" AT ENDS.
BUTTS LAPPED & 3R, 2R TO 1R AT ENDS.

STRINGER PLATE 65⅝" × ·65" FOR ½L ⊗
·42" AT ENDS BUTTS LAPPED & 4R TO 3R
2R (NOT EXCEEDING ·42)
STRINGER ANGLE 6" × 6" × ·60" FOR ½L ⊗
TO 3½" × 3½" × ·42 AT ENDS.

·26 CENTRE DIVISION STIFFRS, 5" × 3" × ·32 O.A. FITTED ON ALTERNATE BEAMS.

UPPER DECK BEAMS ON EVERY FRAME 8" × 3½" × ·42" B.A.
FOR REINFORCED HATCH END BEAMS & BEAMS AT ENDS SEE PROFILE & DECK PLAN.

BEAM KNEES. 24" × ·46" 5-7/8" RIV. EACH ARM.

SECOND DECK PLATING ·36" FOR ½L ⊗ ABREAST OPENINGS
·34" INSIDE LINE OF OPENINGS ·30 AT ENDS.
BUTTS LAPPED & 2R TO 1R AT ENDS.

STRINGER PLATE 82¾" × ·38" FOR ½L ⊗
·35" AT ENDS. BUTTS LAPPED & 2R.

ALTERNATIVELY 3" × 3" × ·36" CONNECTION

9" B.A. COAMING

BEAMS LUGGED TO BHD. CLEAR OF STIFFRS.

·36" FITTED CHOCK PLATE BETWEEN FRS. WELDED TO SHELL & DECK.

·30" CHOCK PLATE FLANGED

2 × 30 FLAT WELDED TO CHOCK PLATE BETWEEN FRS.

SECOND DECK BEAMS ON EVERY FRAME 9" × 3" × ·36" B.A. FOR REINFORCED HATCH END BEAMS AND BEAMS AT ENDS SEE PROFILE & DECK PLAN.

BEAM KNEES 33½" × ·40" FLANGED 2½" 8-7/8" RIV. EACH ARM.

IN WAY OF DEEP FRAMING FORD 50" × ·50" FL. 3" 12-7/8" RIVS.

SIDE FRAMING.

FRAME SPACING 31" APART, 27" FORWARD 3/5 LEN. FORWARD, 24" IN FORE & AFT PEAK
MAIN SIDE FRAMES IN MIDSHIP PORTION 12" × 3½" × 9/16" B.A. ON EVERY FRAME TO SECOND DECK AND CARRIED TO UPPER DECK ON ALTERNATE FRAMES
MAIN SIDE FRAMES AFT CLEAR OF MIDSHIP PORTION & TUNNEL RECESS 12" × 3½" × 9/16" B.A. EVERY FRAME TO SECOND DECK, AND CARRIED TO UPPER DECK ON ALTERNATE FRAME
MAIN SIDE FRAMES FORWD CLEAR OF MIDSHIP PORTION & DEEP FRAMING 12" × 3½" × 9/16" B.A. EVERY FRAME TO SECOND DECK, AND CARRIED TO UPPER DECK ON ALTERNATE FRAME (SEE PROFILE)
MAIN SIDE FRAMES IN WAY OF DEEP FRAMING FORWD 10% ABAFT RULE POSITION OF COLLISION BULKHEAD (SEE PROFILE & DECK PLAN.) (15" × 4 × 4 × ·60/·62" CHANLS OR 12" × 3½" × ·55" B.A. WITH 6" × 6" × ·50" REVERSE BAR (14" GIRDER) ON EVERY FRAME TO SECOND DECK. FOR TWEEN DECK FRAMES SEE PROFILE & DECK PLAN.
MAIN-SIDE FRAMES IN WAY OF TUNNEL RECESS 10" × 3½" × ·48" B.A. ON EVERY FRAME TO SECOND DECK FOR TWEEN DECK FRAMES SEE PROFILE & DECK PLAN

FRAMES IN BOILER ROOM & PERMANENT BUNKERS (ABREAST BOILER ROOM) TO BE ADDITIONALLY INCREASED ·06"
FRAMES IN FORE & AFT PEAK TANKS 8" × 3½" × ·35" B.A. TO UPPER & FORECASTLE DECKS
ALTERNATELY, INTERMEDIATE FRAMES IN FORECASTLE 5" × 3" × ·31" O.A. SCARPHED OR BRACKETED
MAIN FRAMES EXTENDED TO UPPER DECK IN WAY OF HATCH END BEAMS.

·30" CENTRE DIVISION FOR SCANTLING OF STIFFRS SEE PROFILE & DECK PLAN

STIFFRS ON ALTERNATE BEAMS AT HATCH END TO BE BRACKETED TOP & BOTTOM.

INNER BOTTOM PLATING ·44" FOR ½ LEN ⊗ TO ·40" AT ENDS
·52" IN E.S. ·58" IN B.S. BUTTS LAPPED & 2 R.
SEAMS LAPPED & 1 R.

FLOOR PLATES ·42" THROUGHOUT IN HOLDS & ENGINE SPACE
·52" IN BOILER SPACE. WATERTIGHT FLOORS ·42 + ·08" = ·50" WITH STIFFRS 6" × 3" × ·35" O.A. SPACED 30" APART FOR OVERFLOW 34'-3" ABOVE TANK TOP

TANK TOP CENTRE STRAKE TO RULE 53" × ·52" FOR ½ LEN ⊗
TO ·44" AT ENDS, ·52" IN ENGINE SPACE, ·58" IN BOILER SPACE
FITTED 71¾" × ·50" FOR ½ LEN ⊗ TO ·43" AT ENDS
·52" IN E.S. ·58" IN B.S. BUTTS LAPPED & 3 R TO 2 R AT ENDS.
CENTRE GIRDER TOP ANGLES 3½" × 3½" × ·48" FOR ½ LEN ⊗ ·44 AT ENDS ·58" IN B.S.

WING BRACKET ·44, ·54 B.S.
" " SHELL ANGLE 3½" × 3½" × ·44", ·54" B.S.
GUSSET ·42, ·52 B.S. SEE DETAIL.

STIFFRS WELDED TO TANK TOP.
ALTERNATIVELY 6" × 6" × ·40 LUG 4 ¾" RIVS

BULKHEAD WELDED TO TANK TOP

ALTERNATIVELY 3½ × 3 × ·40 CONNECTION 3½ FLGE TO T.T.

·4" × 3" × ·42" B.A.

6" × 3" × ·42" B.A. CONTINUOUS.

UNDER BOILER STOOLS IN ENGINE SPACE THRUST SEAT TO BEYOND SEAT. INTERCOSTAL

6" × 3½" × ·42" B.A. CONTINUOUS.

3-¾" RIV.

5¼" D.R. SEAM

KEEL ANGLES 4" × 4" × ·54 FOR ½L ⊗ TO ·50 AT ENDS

GUSSET PLATE IN WAY OF PANTING 17" WITH 10-7/8 RIVS.

DRAIN HOLES ARRANGED AT SHIP.

BILGE KEEL 12" BULB PLATE WELDED TO SHELL FOR ABOUT 110'-0" AMIDSHIPS.

FORECASTLE.
STRINGER PLATE 35" × ·36" ~~BUTTS~~
STRINGER ANGLE 3½" × 3½" × ·36"
DECK PLATING ·32" UNSHEATHED
BUTTS LAPPED 1R
SIDE PLATING ·40" SEAMS & BUTTS
BEAMS ON EVERY FRAME AS PER PROFILE & DECK PLAN.

"K" OUT & IN
77½" × ·73" FOR ½L ⊗
TO ·46" AT ENDS, BUTTS LAPPED & R
FOR ½L ⊗ TO 3 R AT ENDS.

"J" IN.
83¼" × ·65" FOR ½L ⊗
TO ·46" AT ENDS
BUTTS LAPPED & 3 R.

"H" OUT.
83¼" × ·65" FOR ½L ⊗
TO ·45 AT ENDS
BUTTS LAPPED & 3R.

"G" IN.
83¼" × ·60" FOR ½L ⊗
TO ·45 AT ENDS
BUTTS LAPPED & 3R.

"F" OUT.
83¼" × ·60 FOR ½L ⊗
TO ·45 AT ENDS
BUTTS LAPPED & 3R.

"E" IN.
77½" × ·64" FOR ½L ⊗
TO ·50 AT ENDS
INSIDE STRAPS 4R

MARGIN PLATE 36" × ·54 − ·60" IN B.S.
BUTTS LAPPED & 3 R. THROUGHOUT
MARGIN ANGLE 3½" × 3½" × ·54" TO SHELL
LUGS TO FRAME BRACKETS &
FLOOR ENDS 6" × 6" × ·44 SINGLE WITH 12-7/8 RIVS

KEEL OUT.
54 × ·80" FOR 3/5 L ⊗ TO ·70" AT ENDS
BUTTS WELDED & DOUBLE STRAPPED ALTERNATELY.

"A" IN.
77½" × ·65" FOR ½L ⊗
TO ·50" AT ENDS
BUTTS LAPPED & 4 R. TO 3R.

"B" OUT.
77½" × ·60" FOR ½L ⊗
TO ·50" AT ENDS
BUTTS LAPPED & 4 R TO 3R.

"C" IN.
77½" × ·65" FOR ½L ⊗
TO ·50" AT ENDS
BUTTS LAPPED 4 R. TO 3R.

"D" OUT.
70½" × ·65" FOR ½L ⊗
TO ·50" AT ENDS.
INSIDE STRAPS 4 R.
LAPS 4 R TO 3 R.

THICKNESS OF BOTTOM SHELL PLATING FROM FORWARD HALF LENGTH FORWARD TO RULE POSITION OF COLLISION BULKHEAD ·63" + 10% = ·70"

SPECIAL PLAN STRENGTHENING OF BOTTOM FORWARD TO BE SUBMITTED LATER.

JOHN READHEAD & SONS LTD SOUTH SHIELDS

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